

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q64056

Michel RUFFIN, et al.

Appln. No.: 09/807,464

Group Art Unit: 2154

Confirmation No.: 7377

Examiner: Haresh N. PATEL

Filed: June 29, 2001

For: A METHOD FOR THE ASYNCHRONOUS TRANSMISSION OF INFORMATION IN  
ACCORDANCE WITH ACID PROPERTIES

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

**Table of Contents**

I.	REAL PARTY IN INTEREST .....	2
II.	RELATED APPEALS AND INTERFERENCES .....	3
III.	STATUS OF CLAIMS .....	4
IV.	STATUS OF AMENDMENTS .....	5
V.	SUMMARY OF THE CLAIMED SUBJECT MATTER .....	6
VI.	GROUND OF REJECTION TO BE REVIEWED ON APPEAL .....	10
VII.	ARGUMENT .....	11
	CLAIMS APPENDIX .....	26
	EVIDENCE APPENDIX: .....	29
	RELATED PROCEEDINGS APPENDIX.....	30

**I. REAL PARTY IN INTEREST**

The real party in interest is the Assignee, Alcatel, by virtue of an assignment recorded in the U.S. Patent and Trademark Office on June 29, 2001 at Reel 011951, Frame 0049.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals, judicial proceedings, or interferences known to the Appellant, Appellant's legal representative, or the Assignee, which may be related to, directly affected by, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-6 are all of the claims pending in the application and are the subject of this appeal. Claims 1-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schaefer et al. (U.S. Patent No. 6,157,927; hereinafter “Schaefer”) in view of “ObjectStore Java API User Guide”, Chapter 5, Working with Transactions, pages 1-10 (hereinafter “ObjectStore”) and Leymann et al. (U.S. Patent No. 6,012,094; hereinafter “Leymann”).

The Advisory Action, mailed August 3, 2006, indicates at page 2 that Appellant’s arguments submitted in the Response Under 37 C.F.R. § 1.116, filed July 11, 2006, overcome the rejections under 35 U.S.C. § 132 and 35 U.S.C. § 112, and hence the 35 U.S.C. § 132 and 35 U.S.C. § 112 rejections are withdrawn.

All of the claims are set forth in the attached Appendix.

**IV. STATUS OF AMENDMENTS**

On July 11, 2006, Appellants filed a Response Under 37 C.F.R. § 1.116, but no claims were amended. Accordingly, the claims stand as presented prior to the Final Office Action of April 24, 2006.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Related art communication systems transmit data between suppliers and consumers via communications channels. (page 1, lines 4-5). A supplier of data initiates a transaction, and the data is then “propagated” to intermediate elements (i.e., communications channels) and eventually reaches a consumer. Once the data has been delivered, properties associated with the execution of the transaction are verified before confirming the modifications effected (i.e., the delivery of the data). (page 1, lines 19-24). Transactions need synchronization in order to ensure the stability of the transactions and allow the stability to be monitored from supplier to consumer. (page 1, lines 27-29).

In a synchronous system, a transaction may be initiated and guarantee compliance with Atomicity, Coherence, Isolation, and Durability (ACID) properties from information supplier to consumer. (page 3, lines 3-4). However, in the asynchronous communications environment, asynchronous communication channels imply desynchronization of suppliers and consumers. (page 1, lines 26-27). Thus, the actions that guarantee these ACID properties must interact with each other in a particular and reliable way, depending on a required quality of service. (page 3, lines 5-7).

The claimed invention is directed to a method, communications channel and a transactional asynchronous communication architecture to provide asynchronous transmission of information between suppliers and consumers via a string of communication channels, wherein the transmission is accomplished asynchronously in accordance with Atomicity, Coherence, Isolation, and Durability (ACID) properties. (page 3, lines 8-14).

Claim 1 is directed to a method of transmitting information asynchronously between a supplier (Fig. 1, #1; Fig. 2, #F1,F2) and a consumer (Fig. 1, #5; Fig. 2, #C1,C2) in accordance

with Atomicity, Coherence, Isolation and Durability (ACID) properties, said supplier (Fig. 1, #1; Fig. 2, #F1,F2) and said consumer (Fig. 1, #5; Fig. 2, #C1,C2) being connected by a chain of communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15).

The claimed method comprises:<sup>1</sup>

transmitting said information by means of a series of sequential independent transactions set up between said supplier (Fig. 1, #1; Fig. 2, #F1,F2) and a first communication channel (left rectangular block 2 of Fig. 1; 1<sup>st</sup> channel or 2<sup>nd</sup> channel of Fig. 2) of said chain, between each of the communication channels of said chain (left rectangular block 2 and right rectangular block 2 of Fig. 1; 1<sup>st</sup> channel or 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel of Fig. 2), and between a last communication channel of said chain (right rectangular block 2 of Fig. 1; 3<sup>rd</sup> channel of Fig. 2) and said consumer (Fig. 1, #5; Fig. 2, #C1,C2),

wherein each of the transactions between the communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2) of said chain and between the last communication channel (right rectangular block 2 of Fig. 1; 3<sup>rd</sup> channel of Fig. 2) of said chain and said consumer (Fig. 1, #5; Fig. 2, #C1,C2) is set up if a previous transaction has succeeded. (page 4, lines 16-32).

Claim 4 is directed to a communication channel (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) enabling asynchronous transmission of information between a supplier (Fig. 1, #1; Fig. 2, #F1,F2) and a consumer (Fig. 1, #5; Fig. 2, #C1,C2) in accordance with Atomicity, Coherence, Isolation and

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<sup>1</sup> See Fig. 1, Fig. 2, and specification at page 4, line 11 to page 5, line 35.

Durability (ACID) properties, said communication channel (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) having a set of clients which can be other communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) or consumers (Fig. 1, #5; Fig. 2, #C1,C2), said channel (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15).

The claimed communication channel comprises:<sup>2</sup>

means for storing said information which is contained in a transaction for which said communication channel is a target, (page 4, lines 19-20, 24-25; page 5, lines 6-7, 18; Fig. 1, #4, #6)

means for finalizing said transaction, (page 4, lines 22-28; page 5, lines 8-11, 18, Fig. 1, #2, #5) and

means for initiating other transactions containing said information with said set of clients if said transaction has succeeded. (page 4, lines 16-32; page 5, lines 1-5; Fig. 1, #1, #2)

Claim 6 is directed to a transactional asynchronous communication architecture comprising a plurality of communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) enabling asynchronous transmission of information between a supplier (Fig. 1, #1; Fig. 2, #F1,F2) and a consumer (Fig. 1, #5; Fig. 2, #C1,C2) in accordance with Atomicity, Coherence, Isolation and Durability (ACID) properties, each of said plurality of communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) having

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<sup>2</sup> See Fig. 1, Fig. 2, and specification at page 4, line 11 to page 5, line 35.



a set of clients which can be other of said plurality of communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15) or consumers (Fig. 1, #5; Fig. 2, #C1,C2), wherein each of the plurality of communication channels (left and right rectangular blocks 2 in Fig. 1; 1<sup>st</sup> channel, 2<sup>nd</sup> channel, and 3<sup>rd</sup> channel in Fig. 2; page 4, lines 11-15).

The claimed transactional asynchronous communication architecture comprises:<sup>3</sup>

means for storing said information contained in a transaction for which said one of the plurality of communication channels is a target, (page 4, lines 19-20, 24-25; page 5, lines 6-7; Fig. 1, #4, #6)

means for finalizing said transaction, (page 4, lines 22-28; page 5, lines 8-11, 18; Fig. 1, #2, #5) and

means for initiating other transactions containing said information with said clients if said transaction has succeeded. (page 4, lines 16-32; page 5, lines 1-5, 18; Fig. 1, #1, #2).

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<sup>3</sup> See Fig. 1, Fig. 2, and specification at page 4, line 11 to page 5, line 35.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The rejection of claims 1-6 under 35 U.S.C. § 103(a) as being unpatentable over Schaefer in view of ObjectStore and Leymann.

**VII. ARGUMENT**

Appellant respectfully submits that claims 1-6 would not have been rendered obvious in view of the Examiner's proposed combination of Schaefer, ObjectStore, and Leymann because 1) a person having ordinary skill in the art would not have been motivated to combine the teachings of the Schaefer and Leymann references, and 2) even if the teachings of the Schaefer and Leymann references could be combined, the combination does not teach or suggest all of the features of the claimed invention.

**I. CLAIMS 1-3**

***A. A Person of Ordinary Skill in the Art Would Not Have Been Motivated to Combine the Teachings of the Schaefer and Leymann References.***

Appellant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the cited Schaefer and Leymann references to produce the claimed invention.

In rejecting claim 1, the Examiner maintains that the Schaefer and ObjectStore combination teaches all of the recited features except the feature wherein "each of the transactions between the communications channels of said chain and between the last communication channel of said chain and said consumer is set up if a previous transaction has succeeded." The Examiner then cites to Leymann as allegedly curing this deficiency. As the alleged motivation to combine the teachings of Schaefer and Leymann, the Examiner maintains that the combination would facilitate handling a series of sequential transactions because the sequential transactions would support processing of information in a sequential manner. Additionally, the Examiner argues that the series of sequential transactions would enhance

providing information from one entity to another. However, Appellant respectfully disagrees with this motivation or suggestion to combine.

With respect to the Examiner's first proposed motivation, Appellant respectfully submits that the Examiner's argument is a mere tautology -- i.e., that sequential transactions facilitate sequential transactions because they are sequential transactions. This is not a motivation or suggestion, but merely a re-statement that Leymann allegedly teaches sequential transactions. As such, this amounts to using Appellant's disclosure as a roadmap for piecing together elements, and is not a motivation.

With respect to the second alleged motivation, the Schaefer reference is directed to combining transactional environments. Specifically, Schaefer is concerned with combining what would otherwise be disparate transactional processing systems and environments, such as providing interoperability between windows based clients, e.g., MS DTC, and an X/Open XATMI-compliant system. The MS DTC environment cannot interoperate with resources on a remote server controlled by an X/Open XATMI compliant transaction manager. Since there is a large installed base of client server applications that are built upon an X/Open XATMI compliant transaction manager, it is desirable to provide a method and apparatus that enable an MS DTC compliant manager to include such service in a global transaction that the MS DTC compliant manager controls.

A global transaction system has a client interacting with multiple servers, one for a hotel reservation, one for a car rental reservation, and one for a flight reservation, for example. Each server has its own database that must be updated, and these updates are performed by a local transaction manager, under the control of a global transaction manager which serves to coordinate the updates. (see col. 2, line 50 to col. 3, line 25). The problem with this system is

that many different local transaction managers exist, for example the X/Open XATMI compliant transaction manager and the MS DTC transaction manager, and these transaction managers do not coexist well. Schaefer thus seeks to provide a system to more easily allow the X/Open XATMI-compliant manager to interact with the MS DTC transaction manager. Stated more broadly, Schaefer is concerned with providing interoperability between servers in disparate transactional processing systems and environments.

In contrast, Leymann is concerned with ensuring the outcome atomicity of a collection of transactions. Specifically, Leymann is concerned with optimizing communication traffic for coordination of multiple transactions with optimizing concurrency behavior and throughput of a collection of transactions. Leymann accomplishes this by grouping transactions and then processing the group as a set of chained strata.

Appellant respectfully submits that one of skill in the art when faced with the problem of Schaefer, i.e., combining disparate transactional processing systems and environments, would not look to the solution of Leymann for an answer, because Leymann is only concerned with improving the operation of multiple transactions within one transactional system or environment.

Moreover, Appellant respectfully submits that the Schaefer and Leymann references teach away from their combination. Specifically, grouping the transactions into strata, as proposed by Leymann, if applied to the system of Schaefer would result in decreased functionality because X/Open XATMI-compliant transaction managers would be grouped with MS DTC transaction managers, thus resulting in an inoperable system.

***B. Even Assuming that the Teachings of Schaefer and Leymann References may be Combined, the Resulting Combination Does Not Teach All the Features of the Claimed Invention***

Even assuming *arguendo* that the Schaefer and Leymann references may be combined, the combination still does not teach all features recited by the claims.

For example, claim 1 recites the limitation of transmitting information by means of independent transactions. Neither ObjectStore nor Leymann contain any teachings relevant to this point, as acknowledged by the Examiner. The Examiner maintains that Schaefer teaches multiple transactions including transmitting information by means of independent transactions by virtue of both the non-global and global transactions described in Schaefer at cols. 2 and 3. However, Appellant respectfully disagrees with the Examiner's position.

At col. 2 and col. 3, Schaefer shows both non-global and global transactions. The non-global transaction acts as a traditional transaction, the difference being that the work is distributed in a client/server manner. Thus, a client, e.g. a travel agent, connects to a server and the server interacts with a database. This teaching shows one transaction.

The global transaction, discussed in Schaefer at col. , consists of multiple, coordinated database updates. However, again, even in such a distributed transaction processing environment, there is a single transaction that is performed by multiple application programs that access one or more databases on one or more computers across a network. This is what it means to be distributed. In this global system there is a global transaction and subordinate transactions of the global transactions, with the global transaction coordinating updates. See col. 3, lines 1-10. Thus, the transactions are not indeed independent but rather are coordinated and rely on the global transaction. Thus, Schaefer does not show transmitting information by means of independent transactions as set forth by claim 1.

In the response to arguments section of the Final Office Action, dated April 24, 2006, at pages 2-3, the Examiner argues that Schaefer discloses the claimed limitations transmitting

information by means of independent transactions, and cites to Figs. 6A to 6D and col. 3, lines 1-53 and col. 13, line 34 to col. 14, line 49 for support of this proposition.

However, Appellant respectfully submits that the teachings at col. 3, lines 1-53 of Schaefer actually supports the opposite contention -- that all of the transactions in Schaefer's global transaction are dependent, not independent. Schaefer specifically states "with a global transaction, tasks that were once performed independently may be coordinated and automated." (col. 3, lines 16-18). Cols. 13 and 14 do not contain any relevant teachings regarding independent transactions. Rather, the cited portion discusses a bi-directional, two-phase commitment communications protocol operating as the connection manager. (see col. 13, lines 40-44). This two-phase commit is indicative of the global transaction discussed at col. 3, lines 1-53. Figs. 6A-6D merely teach a state machine, which again operates in conjunction with the global transaction. Thus, none of the additional cited portions of Schaefer support the Examiner's contention. In fact, they support the opposite. As such, Schaefer does not teach or suggest transmitting information by means of independent transactions as set forth in claim 1.

Claim 1 also recites the limitation that the supplier and the consumer are connected by a chain of communication channels. The Examiner again points to the non-global and global transactions as allegedly illustrating a chain of communication channels. However, Appellant again respectfully disagrees with the Examiner's position.

As noted above with respect to the non-global transaction situation, work is distributed in a client/server manner. In other words, a client contacts a server which interacts with a database in order to perform the single transaction. Thus, there is only one communication channel between the supplier and the consumer, and no chain of communications channels is described..

In the global transaction system, a client contacts a supplier seeking air, car and hotel reservations. In this single transaction, the client interacts with an air server which has its own air database for airline tickets. The client interacts with another server that interacts with a car database, and the client interacts with another server that interacts with a hotel database. While there may be three different communication channels, i.e., one between the consumer and the air server, one between the consumer and the car server, and one between the consumer and the hotel server, these are not formed in a chain. A chain has links, one connected to another. Thus, Schaefer at cols. 2 and 3, in his discussion of non-global and global transactions, does not show, teach or suggest a chain of communication channels which connects a supplier and a consumer, as set forth by claim 1.

In the response to arguments section of the April 24, 2006 Final Office Action, the Examiner argues, in essence, that the claims do not specify what is considered as a communications channel, and therefore the claims clearly read on the Examiner's interpretation of Schaefer. (see pages 4-5). Specifically, the Examiner cites to Fig. 3 of Schaefer as containing a series of software and/r hardware modules between a transaction producer and consumer that carryout communication as allegedly corresponding to the claimed communication channels. Appellant respectfully notes that at page 1, lines 12-13 of the specification, it is stated that an asynchronous communications service contains a manager and one or more communication channels. Thus, the communications channels are different from a manager. Fig. 3 of Schaefer shows a resource manger 70 and a connection manager 66.<sup>4</sup> Thus, the software and hardware modules of Fig. 3 of Schaefer do not show the chain of communication channels feature as set

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<sup>4</sup> Appellant assumes for the purposes of argument only that it is the Examiner's position that the client application 52 corresponds to the claimed consumer, but respectfully notes that Fig. 3 does not appear to contain any teachings relevant to the claimed supplier.



forth in claim 1. Neither Leymann nor ObjectStore contain any disclosure relevant to this issue. Therefore, Appellant respectfully submits that claim 1 is patentable over the Schaefer/Leymann/ObjectStore combination for this additional reason.

Moreover, since Schaefer does not show a chain of communication channels, it is logically impossible for Schaefer to show asynchronous transactions that are setup between a supplier and a first communication channel of said chain, between each of the communication channels of said chain, and between a last communication channel of said chain and the consumer, as also set forth by claim 1.

Thus, for at least the reasons discussed above, Appellant respectfully submits that claim 1 contains patentable features over the Schaefer, ObjectStore, and Leymann combination

Appellant respectfully submits that since claims 2 and 3 depend from claim 1 and recite additional narrowing limitations, claims 2 and 3 are patentable over the Schaefer, ObjectStore, and Leymann combination by virtue of their respective dependencies.

## **II. CLAIMS 4-5**

### ***A. A Person of Ordinary Skill in the Art Would Not Have Been Motivated to Combine the Teachings of the Schaefer and Leymann References.***

Appellant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the cited Schaefer and Leymann references to produce the claimed invention.

In rejecting claim 4, the Examiner alleges that one skilled in the art would be motivated to combine the Schaefer and Leymann teachings because the combination would facilitate handling a series of sequential transactions because the sequential transactions would support processing of information in a sequential manner. Additionally, the Examiner argues that the

series of sequential transactions would enhance providing information from one entity to another. However, Appellant respectfully disagrees with this motivation or suggestion to combine.

With respect to the Examiner's first proposed motivation, Appellant respectfully submits that the Examiner's argument is a mere tautology -- i.e., that sequential transactions facilitate sequential transactions because they are sequential transactions. This is not a motivation or suggestion, but merely a re-statement that Leymann allegedly teaches sequential transactions. As such, this amounts to using Appellant's disclosure as a roadmap for piecing together elements, and is not a motivation.

With respect to the second alleged motivation, the Schaefer reference is directed to combining transactional environments. Specifically, Schaefer is concerned with combining what would otherwise be disparate transactional processing systems and environments, such as providing interoperability between windows based clients, e.g., MS DTC, and an X/Open XATMI-compliant system. The MS DTC environment cannot interoperate with resources on a remote server controlled by an X/Open XATMI compliant transaction manager. Since there is a large installed base of client server applications that are built upon an X/Open XATMI compliant transaction manager, it is desirable to provide a method and apparatus that enable an MS DTC compliant manager to include such service in a global transaction that the MS DTC compliant manager controls.

A global transaction system has a client interacting with multiple servers, one for a hotel reservation, one for a car rental reservation, and one for a flight reservation, for example. Each server has its own database that must be updated, and these updates are performed by a local transaction manager, under the control of a global transaction manager which serves to

coordinate the updates. (see col. 2, line 50 to col. 3, line 25). The problem with this system is that many different local transaction managers exist, for example the X/Open XATMI compliant transaction manager and the MS DTC transaction manager, and these transaction managers do not coexist well. Schaefer thus seeks to provide a system to more easily allow the X/Open XATMI-compliant manager to interact with the MS DTC transaction manager. Stated more broadly, Schaefer is concerned with providing interoperability between servers in disparate transactional processing systems and environments.

In contrast, Leymann is concerned with ensuring the outcome atomicity of a collection of transactions. Specifically, Leymann is concerned with optimizing communication traffic for coordination of multiple transactions with optimizing concurrency behavior and throughput of a collection of transactions. Leymann accomplishes this by grouping transactions and then processing the group as a set of chained strata.

Appellant respectfully submits that one of skill in the art when faced with the problem of Schaefer, i.e., combining disparate transactional processing systems and environments, would not look to the solution of Leymann for an answer, because Leymann is only concerned with improving the operation of multiple transactions within one transactional system or environment.

Moreover, Appellant respectfully submits that the Schaefer and Leymann references teach away from their combination. Specifically, grouping the transactions into strata, as proposed by Leymann, if applied to the system of Schaefer would result in decreased functionality because X/Open XATMI-compliant transaction managers would be grouped with MS DTC transaction managers, thus resulting in an inoperable system.

***B. Even Assuming that the Teachings of Schaefer and Leymann References may be Combined, the Resulting Combination Does Not Teach All the Features of the Claimed Invention***

Even assuming *arguendo* that the Schaefer and Leymann references may be combined, the combination still does not teach all features recited by the claims.

For example, claim 4 recites the feature that each communication channel has a set of clients which are other communication channels or consumers. Neither Leymann nor ObjectStore contain any teachings relevant to this feature, as acknowledged by the Examiner. However, the Examiner suggests that this limitation is met by virtue of the teachings of Schaefer at col. 8, lines 25-67. Appellant respectfully disagrees with the Examiner's position.

At col. 8, lines 25-67, Schaefer describes a resource manager that receives XATMI service requests and directives issued by a first transaction manager for a given single global transaction. The resource manager then translates the service requests and the directives into service requests for an OSI TP protocol machine. By virtue of this system, the remote server is able to appear to the first transaction manager as simply another local resource within the transaction processing environment. This description does not show or teach a communication channel which has a set of clients. For example, if, *arguendo*, the first transaction manager may be viewed as a communication channel, it only has one client, that is, the resource manager. On the other hand, if the resource manager may be viewed as a communication channel, it only has one client, the OSI TP protocol machine. Therefore, Schaefer does not teach or suggest a communication channel having a set of clients which are other communication channels or consumers, as set forth by claim 4.

In the response to argument section of the April 24, 2006 Final Office Action, the Examiner advances, almost verbatim, the same arguments discussed above with respect to the chain of communication channels feature. As discussed above, the software and hardware modules of Fig. 3 do not show the claimed chain of communication channels as set forth in the claims. Therefore, logically, Fig. 3 of Schaefer cannot show the feature whereby each communications channel has a set of clients which are other communication channels or consumers, as set forth in claim 4. Neither Leymann nor ObjectStore contain any teachings relevant to this feature. Therefore, claim 4 contains patentable features over the Schaefer, ObjectStore, and Leymann combination.

Appellant respectfully submits that since claim 5 depends from claim 4 and recites additional narrowing limitations, claim 5 is patentable over the Schaefer, ObjectStore, and Leymann combination by virtue of its dependency.

### **III. CLAIM 6**

#### ***A. A Person of Ordinary Skill in the Art Would Not Have Been Motivated to Combine the Teachings of the Schaefer and Leymann References.***

Appellant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the cited Schaefer and Leymann references to produce the claimed invention.

In rejecting claim 6, the Examiner alleges that one skilled in the art would be motivated to combine the Schaefer and Leymann teachings because the combination would facilitate handling a series of sequential transactions because the sequential transactions would support processing of information in a sequential manner. Additionally, the Examiner argues that the series of sequential transactions would enhance providing information from one entity to

another. However, Appellant respectfully disagrees with this motivation or suggestion to combine.

With respect to the Examiner's first proposed motivation, Appellant respectfully submits that the Examiner's argument is a mere tautology -- i.e., that sequential transactions facilitate sequential transactions because they are sequential transactions. This is not a motivation or suggestion, but merely a re-statement that Leymann allegedly teaches sequential transactions. As such, this amounts to using Appellant's disclosure as a roadmap for piecing together elements, and is not a motivation.

With respect to the second alleged motivation, the Schaefer reference is directed to combining transactional environments. Specifically, Schaefer is concerned with combining what would otherwise be disparate transactional processing systems and environments, such as providing interoperability between windows based clients, e.g., MS DTC, and an X/Open XATMI-compliant system. The MS DTC environment cannot interoperate with resources on a remote server controlled by an X/Open XATMI compliant transaction manager. Since there is a large installed base of client server applications that are built upon an X/Open XATMI compliant transaction manager, it is desirable to provide a method and apparatus that enable an MS DTC compliant manager to include such service in a global transaction that the MS DTC compliant manager controls.

A global transaction system has a client interacting with multiple servers, one for a hotel reservation, one for a car rental reservation, and one for a flight reservation, for example. Each server has its own database that must be updated, and these updates are performed by a local transaction manager, under the control of a global transaction manager which serves to coordinate the updates. (see col. 2, line 50 to col. 3, line 25). The problem with this system is

that many different local transaction managers exist, for example the X/Open XATMI compliant transaction manager and the MS DTC transaction manager, and these transaction managers do not coexist well. Schaefer thus seeks to provide a system to more easily allow the X/Open XATMI-compliant manager to interact with the MS DTC transaction manager. Stated more broadly, Schaefer is concerned with providing interoperability between servers in disparate transactional processing systems and environments.

In contrast, Leymann is concerned with ensuring the outcome atomicity of a collection of transactions. Specifically, Leymann is concerned with optimizing communication traffic for coordination of multiple transactions with optimizing concurrency behavior and throughput of a collection of transactions. Leymann accomplishes this by grouping transactions and then processing the group as a set of chained strata.

Appellant respectfully submits that one of skill in the art when faced with the problem of Schaefer, i.e., combining disparate transactional processing systems and environments, would not look to the solution of Leymann for an answer, because Leymann is only concerned with improving the operation of multiple transactions within one transactional system or environment.

Moreover, Appellant respectfully submits that the Schaefer and Leymann references teach away from their combination. Specifically, grouping the transactions into strata, as proposed by Leymann, if applied to the system of Schaefer would result in decreased functionality because X/Open XATMI-compliant transaction managers would be grouped with MS DTC transaction managers, thus resulting in an inoperable system.

***B. Even Assuming that the Teachings of Schaefer and Leymann References may be Combined, the Resulting Combination Does Not Teach All the Features of the Claimed Invention***

Even assuming *arguendo* that the Schaefer and Leymann references may be combined, the combination still does not teach all features recited by the claims.

For example, claim 6 recites the feature that each communication channel has a set of clients which are other communication channels or consumers. Neither Leymann nor ObjectStore contain any teachings relevant to this feature, as acknowledged by the Examiner. However, the Examiner suggests that this limitation is met by virtue of the teachings of Schaefer at col. 8, lines 25-67. Appellant respectfully disagrees with the Examiner's position.

At col. 8, lines 25-67, Schaefer describes a resource manager that receives XATMI service requests and directives issued by a first transaction manager for a given single global transaction. The resource manager then translates the service requests and the directives into service requests for an OSI TP protocol machine. By virtue of this system, the remote server is able to appear to the first transaction manager as simply another local resource within the transaction processing environment. This description does not show or teach a communication channel which has a set of clients. For example, if, *arguendo*, the first transaction manager may be viewed as a communication channel, it only has one client, that is, the resource manager. On the other hand, if the resource manager may be viewed as a communication channel, it only has one client, the OSI TP protocol machine. Therefore, Schaefer does not teach or suggest a communication channel having a set of clients which are other communication channels or consumers, as set forth by claim 6. Therefore, claim 6 contains patentable features over the Schaefer, ObjectStore, and Leymann combination.

#### **IV. CONCLUSION**

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.



The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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**23373**

CUSTOMER NUMBER

Date: November 24, 2006

**CLAIMS APPENDIX**

**CLAIMS 1-6 ON APPEAL:**

1. (previously presented): A method of transmitting information asynchronously between a supplier and a consumer in accordance with Atomicity, Coherence, Isolation and Durability (ACID) properties, said supplier and said consumer being connected by a chain of communication channels, the method comprising transmitting said information by means of a series of sequential independent transactions set up between said supplier and a first communication channel of said chain, between each of the communication channels of said chain, and between a last communication channel of said chain and said consumer, wherein each of the transactions between the communication channels of said chain and between the last communication channel of said chain and said consumer is set up if a previous transaction has succeeded.

2. (previously presented): The method according to claim 1, wherein each communication channel has a set of clients which are other communication channels or consumers, and when ~~a~~ one of said communication channels of said chain is a target of one of said independent transactions, the method further comprises:

storing said information in a reliable memory,

finalizing the one of said independent transactions, and

if said one of said independent transactions has succeeded, initiating other independent transactions with said clients containing said information.

3. (previously presented): The method according to claim 1, wherein to initiate said independent transactions, said information is stored in a plurality of queues each of which is associated with one of a plurality of clients and consumed by a thread.

4. (previously presented): A communication channel enabling asynchronous transmission of information between a supplier and a consumer in accordance with Atomicity, Coherence, Isolation and Durability (ACID) properties, said communication channel having a set of clients which can be other communication channels or consumers, said channel comprising:

means for storing said information which is contained in a transaction for which said communication channel is a target,

means for finalizing said transaction, and

means for initiating other transactions containing said information with said set of clients if said transaction has succeeded.

5. (previously presented): The communication channel according to claim 4, further comprising a plurality of queues each of which is associated with one of said clients.

6. (previously presented): A transactional asynchronous communication architecture comprising a plurality of communication channels enabling asynchronous transmission of information between a supplier and a consumer in accordance with Atomicity, Coherence, Isolation and Durability (ACID) properties, each of said plurality of communication channels

having a set of clients which can be other of said plurality of communication channels or consumers, wherein each of the plurality of communication channels comprises:

means for storing said information contained in a transaction for which said one of the plurality of communication channels is a target,

means for finalizing said transaction, and

means for initiating other transactions containing said information with said clients if said transaction has succeeded.

**EVIDENCE APPENDIX:**

There has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other similar evidence.

**RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.